

CLAIM AMENDMENTS

Claim 1 (canceled)

2. (previously presented) The image display device as set forth in claim 3, wherein said conversion characteristic designation means comprises:

means for selecting the color for which the conversion characteristic is to be designated; and

means for designating the conversion characteristic for the selected color.

3. (previously presented) An image display device for receiving an input image data comprising three or more color data, and displaying the input image data on an image display unit, comprising:

a color converter for converting a first image data comprising three or more color data, into a second image data comprising three or more color data, on the basis of conversion characteristic data;

a conversion characteristic storage for storing the conversion characteristic;

conversion characteristic designation means for designating the conversion characteristic to be used in the color converter, and outputting corresponding conversion characteristic designation data; and

conversion characteristic setting means for calculating the conversion characteristic data on the basis of the conversion characteristic designation data, and setting the conversion characteristic data in the conversion characteristic storage;

wherein said color converter comprises:

a calculation term generator for receiving the first image data, and outputting calculation terms which are effective just for specific hues; and

a matrix calculator performing matrix calculation using the calculation terms effective just for the specific hues, wherein said conversion characteristic data includes matrix calculation coefficients used in said matrix calculator, and

wherein said conversion characteristic setting means calculates the conversion characteristic data by adding or subtracting the value corresponding to the value of the conversion characteristic designation data to or from the coefficients among the coefficients for the calculation term effective for the selected color, among the calculation terms effective just for the specific hues.

4. (previously presented) An image display device for receiving an input image data comprising three or more color data, and displaying the input image data on an image display unit, comprising:

a color converter for converting a first image data comprising three or more color data, into a second image data comprising three or more color data, on the basis of conversion characteristic data;

a conversion characteristic storage for storing the conversion characteristic;

conversion characteristic designation means for designating the conversion characteristic to be used in the color converter, and outputting corresponding conversion characteristic designation data; and

conversion characteristic setting means for calculating the conversion characteristic data on the basis of the conversion characteristic designation data, and setting the conversion characteristic data in the conversion characteristic storage;

wherein said color converter comprises:

a calculation term generator for receiving the first image data, and outputting calculation terms which are effective just for specific hues; and

a matrix calculator performing matrix calculation using the calculation terms effective just for the specific hues, wherein said conversion characteristic designation means comprises:

means for selecting the color for which the conversion characteristic is to be designated; and

means for designating the conversion characteristic for the selected color,

wherein said means for designating the conversion characteristic for the selected color comprises:

means for selecting one of the two adjacent colors toward which the hue of the selected color is to be shifted; and

means for selecting the degree by which the hue of the selected color is to be shifted toward the selected one of the adjacent colors.

5. (previously presented) The image display device as set forth in claim 4, wherein the colors for which the conversion characteristic can be designated include red, green and blue, said device comprising:

means for selecting one of yellow and magenta as said one of the adjacent colors when the selected color is red, for selecting one cyan and yellow as said one of the adjacent colors when the selected color is green, and for selecting one of magenta and yellow as said one of the adjacent colors when the selected color is blue.

6. (previously presented) The image display device as set forth in claim 4, wherein the colors for which the conversion characteristic can be designated include red, yellow, green, cyan, blue, and magenta, said device comprising means for

selecting one of yellow and magenta as said one of the adjacent colors when the selected color is red,

selecting one of red and green as said one of the adjacent colors when the selected color is yellow,

selecting one cyan and yellow as said one of the adjacent colors when the selected color is green,

selecting one of green and blue as said one of the adjacent colors when the selected color is cyan

selecting one of magenta and yellow as said one of the adjacent colors when the selected color is blue, and

selecting one of blue and red as said one of the adjacent colors when the selected color is magenta.

7. (previously presented) The image display device as set forth in claim 4, wherein the colors for which the conversion characteristic can be designated include skin color, said device comprising

means for selecting one of red and yellow as said one of the adjacent colors when the selected color is skin color.

8. (previously presented) The image display device as set forth in claim 4, wherein said conversion characteristic designation data include:

information indicating the color selected by said conversion characteristic designation means;

information indicating the one of the two adjacent colors to which the hue of the selected color is to be shifted; and

information indicating the amount by which the hue of the selected color is to be shifted toward the selected one of said adjacent colors.

Claim 9 (canceled)

10. (previously presented) An image display device for receiving an input image data comprising three or more color data, and

displaying the input image data on an image display unit, comprising:

a color converter for converting a first image data comprising three or more color data, into a second image data comprising three or more color data, on the basis of conversion characteristic data;

a conversion characteristic storage for storing the conversion characteristic;

conversion characteristic designation means for designating the conversion characteristic to be used in the color converter, and outputting corresponding conversion characteristic designation data; and

conversion characteristic setting means for calculating the conversion characteristic data on the basis of the conversion characteristic designation data, and setting the conversion characteristic data in the conversion characteristic storage,

wherein said color converter comprises:

a calculation term generator for receiving the first image data, and outputting calculation terms which are effective just for specific hues; and

a matrix calculator performing matrix calculation using the calculation terms effective just for the specific hues, wherein said calculation term generator comprises:

color extracting means for extracting chromatic and achromatic components from the first image data; and

a polynomial calculator performing comparison operation on the chromatic components,

wherein said color extracting means comprises:

a minimum and maximum calculator for calculating a minimum value $[[\&A]]_{\underline{\alpha}}$ and a maximum value $[[\&B]]_{\underline{\beta}}$ of said first image data; and

a hue data calculator for calculating hue data r, g, b, y, m and c based on said first image data, and said minimum and maximum values $[[\&A]]_{\underline{\alpha}}$ and $[[\&B]]_{\underline{\beta}}$ outputted from said minimum and maximum calculator, wherein said polynomial calculator comprises:

means for generating first comparison-result data based on the hue data outputted from said hue data calculator; and

means for generating second comparison-result data based on said first comparison-result data, and

wherein said matrix calculator is responsive to said hue data, said first comparison-result data, and said second comparison-result data, and performs matrix calculation using at least said hue data, said first comparison-result data, and said second comparison-result data, in accordance with the conversion characteristic from said coefficient storage.

11. (currently amended) The image display device as set forth in claim 10, wherein

said first image data include three color data of red, green and blue,

said minimum and maximum calculator determines the minimum and maximum of the three color data R, G and B;

said hue data calculator calculates the hue data r , g , b , y , m , c by subtraction in accordance with:

$$r = R - [[\&A]]\underline{\alpha},$$

$$g = G - [[\&A]]\underline{\alpha},$$

$$b = B - [[\&A]]\underline{\alpha}.$$

$$y = [[\&B]]\underline{\beta} - B,$$

$$m = [[\&B]]\underline{\beta} - G, \text{ and}$$

$$c = [[\&B]]\underline{\beta} - R;$$

said first comparison-result generator generates the first comparison-result data between the hue data r , g , b and y , m , c ;

said second comparison-result generator comprises:

 multiplying means for multiplying predetermined coefficients with said first comparison-result data; and

 means for producing the second-comparison result data using the output of the multiplying means.

Claims 12-14 (canceled)